

EMERGENCY SERVICES DIVISION

PROCEDURE

BROOKHAVEN NATIONAL LABORATORY

Procedure No. FR-EMS-3.0.8

Revision No. 1

Page 1 of 4

Biohazard Personal Protective Equipment Selection Protocol

1.0 PURPOSE/SCOPE

- 1.1 The purpose of this procedure is to provide guidance to the Fire/Rescue Group members in the selection of personal protective equipment during the performance of emergency rescue or EMT procedures.

2.0 RESPONSIBILITIES

- 2.1 The Duty Fire Officers are responsible to the Fire Chief to ensure that their staff is trained in the content of this procedure and for ensuring that it is carried out.
- 2.2 Fire Rescue Personnel are responsible for ensuring that they implement this SOP.

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<p align="center">EMERGENCY SERVICES DIVISION PROCEDURE BROOKHAVEN NATIONAL LABORATORY</p>	<p>Procedure No. FR-EMS 3.0.8</p>
<p align="center">Biohazard Personal Protective Equipment Selection Protocol</p>	<p>Revision No. 1</p> <p>Page 2 of 4</p>

3.0 **DEFINITIONS**

- 3.1 **Bloodborne Pathogens.** Bloodborne microorganisms that are present in human blood, including, but not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
- 3.2 **Contaminated Sharps.** Any contaminated object that can penetrate the skin, including, but not limited to needles, scalpels, broken glass, and broken capillary tubes.
- 3.3 **Occupational Exposure.** Contact with blood, or other potentially infectious materials that may result from the performance of an employee's duties. This means reasonably anticipated skin, eye, mucous membrane, or parenteral contact.
- 3.4 **Other Potentially Infectious Materials.** Body fluids and body parts that have been identified as having the potential to carry bloodborne pathogens due to their association with blood, such as the following:
 - 3.4.1 Blood (including plasma, serum, red cell platelets, or other blood components), semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, any bloody fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
 - 3.4.2 Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and
 - 3.4.3 HIV-containing cell or tissue cultures, organ cultures, and HIV or HBV-containing culture medium or other solutions; and blood, organs or other tissues from experimental animals infected with HIV or HBV.

4.0 **PREREQUISITES**

- 4.1 Fire/Rescue personnel who perform rescue and emergency service tasks have the potential for occupational exposure to bloodborne pathogens and must:
 - 4.1.1 be included on the Bloodborne Pathogen Protocol of the BNL Occupational Medicine Clinic,
 - 4.1.2 be offered the Hepatitis B vaccine or sign the declination of vaccination form, and
 - 4.1.3 receive annual training for Bloodborne Pathogens.

5.0 **PROCEDURE**

- 5.1 When Fire/Rescue personnel become involved in an emergency rescue or administer emergency medical procedures, they must evaluate the situation and select appropriate personal protection to prevent bloodborne pathogen transmission. The selection criteria are listed in Attachment 1.
- 5.2 Personal protective equipment is located in the ambulance in compartments 4, 6, 11 and the on-board oxygen storage compartment. Additional personal protective equipment and first aid are located in the middle compartment drivers side (or left hand side) of the fire/rescue vehicle.

<p align="center">EMERGENCY SERVICES DIVISION PROCEDURE BROOKHAVEN NATIONAL LABORATORY</p>	<p>Procedure No. FR-EMS 3.0.8</p>
<p>Biohazard Personal Protection Selection Protocol</p>	<p>Revision No. 1</p> <p>Page 3 of 4</p>

5.3 The following represents a list of equipment available on the Fire/Rescue vehicle and ambulance.

Disposable gloves (latex and neoprene),

Disposable gowns,

Disposable masks,

Disposable protective eyewear,

Biohazard bags, and

Sharps containers,

5.4 Disposable equipment shall be discarded on completion of the tasks in red biohazard bags or in red sharps containers as specified in FR-EMS-3.0.- Disposal for Contaminated Waste. Other bags may be used if they are appropriately labeled with biohazard labels only. Sharps containers shall be used for the disposal of sharps material.

5.5 Labels shall be fluorescent orange, or orange-red or predominantly so, with lettering or symbols in a contrasting color.

6.0 REFERENCES

6.1 BNL Bloodborne Pathogens Exposure Control Plan

6.2 Recommendation for Decontamination and Cleaning of Rescue Vehicles. NYS. DOH. EMS Program 1991-1992.

7.0 ATTACHMENTS

7.1 Examples of Recommended Personal Protection for Workers Protection Against HBV Transmission in Prehospital Settings.

<p align="center">EMERGENCY SERVICES DIVISION PROCEDURE BROOKHAVEN NATIONAL LABORATORY</p>	<p>Procedure No. FR-EMS 3.0.8</p>
<p>Biohazard Personal Protection Selection Protocol</p>	<p>Revision No. 1</p> <p>Page 4 of 4</p>

ATTACHMENT 1

Examples of Recommended Personal Protection for Workers Protection Against HIV and HBV Transmission in Prehospital Settings

Task or Activity	Disposable Gloves	Gown	Mask	Protective Eyewear
Bleeding control with spurting blood	Yes	Yes	Yes	Yes
Bleeding control with minimal blood	Yes	No	No	No
Emergency childbirth	Yes	Yes	Yes, if splashing is likely	Yes, if splashing is likely
Blood drawing	At certain ¹ times	No	No	No
Starting an intravenous (IV) line	Yes	No	No	No
Endotracheal intubation, esophageal obturator use	Yes	No	No, unless splashing is likely	No, unless splashing is likely
Oral/nasal suctioning, manually clearing airway	Yes ²	No	No, unless splashing is likely	No, unless splashing is likely
Handling and cleaning instruments with microbial contamination	Yes	No, unless soiling is likely	No	No
Measuring blood pressure	No	No	No	No
Measuring temperature	No	No	No	No
Giving injection	No	No	No	No

NOTE: The examples provided in this table are based on application of universal precautions. Universal precautions are intended to supplement rather than replace recommendations for routine infection control, such as handwashing and using gloves to prevent gross microbial contamination of hands (e.g., contact with urine or feces).

¹Gloves should be worn for phlebotomy if cuts, scratches or other breaks in the skin are present on the worker's hands, if the worker is inexperienced, or the situation suggests a greater possibility of bleeding.

²While not clearly necessary to prevent HIV or HBV transmission unless blood is present, gloves are recommended to prevent transmission of other agents (e.g., Herpes simplex).

From: Centers for Disease Control, February 1989 in Recommendation for Decontamination and Cleaning of Rescue Vehicles. NYS. DOH. EMS Program 1991-1992.